Please replace the paragraph beginning at page 6, line 17, with the following amended paragraph.

K2 -The T-BCD541 gene (SEQ ID NO:12) is responsible for the motor neuron diseases of the SMA type, since its alteration either by partial or total deletion, by mutation or any other modification, is sufficient to lead to a pathological state at the clinical electromyographic or muscle morphological levels.-

Please replace the paragraph beginning at page 6, line 21, with the following amended paragraph.

K3 -The C-BCD541 gene (SEQ ID NO:10) is different from the T-BCD541 gene (SEQ ID NO:12), at the level of the cDNA, since two nucleotides are modified. This C-BCD541 gene is nevertheless not correctly processed during the transcription in controls and patients suffering from motor neuron diseases. The genomic DNA of the C-BCD541 gene is not correctly spliced during the transcription providing thus for an abnormal transcript. The difference between the splicing of the T-BCD541 and C-BCD541 gene results from differences in the sequence of the introns of these genes.-

Please replace the paragraph beginning at page 7, line 3, with the following amended paragraph.

--The present invention thus further characterizes the structure and organization of the human SMN gene which was found to be approximately 20 kb in length and consists of 9 exons interrupted by 8 introns. The nucleotide sequence, amino acid sequence as well as the exon-intron boundaries of the human SMN gene is set forth in Figure 10 (SEQ ID NO:22). All exon-intron boundaries display the consensus sequence found in other human genes. A polyadenylation consensus site is localized about 550 bp downstream from the stop codon (Figure 10). The entire intron/exon structure of the SMN gene permits the characterizations of the SMN gene mutations in SMA disease or other motor neuron diseases.--

K4

Please replace the paragraph beginning at page 7, line 12, with the following amended paragraph.

--The present invention also defines means for the detection of genomic abnormalities relating to motor neuron diseases at the level of the T-BCD541 gene (SEQ ID NO:12) or at the level of the C-BCD541 gene (SEQ ID NO:10).--

K5

Please replace the paragraph beginning at page 9, line 18, with the following amended paragraph.

K6 --In a particular embodiment, the invention relates also to a nucleotide sequence comprising nucleotides 34-915 of the sequence of Figure 3, (SEQ ID NOS:12 and 13), or to a sequence comprising nucleotides 34 to 915 of the sequence of Figure 2 (SEQ ID NOS:10 and 11).--

Please replace the paragraph beginning at page 9, line 21, with the following amended paragraph.

K7 --These nucleotide sequences correspond to the coding sequence of respectively the T-BCD541 gene (SEQ ID NO:12) and C-BCD541 gene (SEQ ID NO:10).--

Please replace the paragraph beginning at page 18, line 6, with the following amended paragraph.

K8 --In another aspect, polyclonal rabbit antiserum were generated against synthetic peptides corresponding to the amino acid sequence of Figure 1 (SEQ ID NO:9), 8 (SEQ ID NO:19) and 12